



**[4910-13-P]**

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2017-1217; Product Identifier 2016-SW-080-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; Air Comm Corporation Air Conditioning Systems**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for Air Comm Corporation (Air Comm) air conditioning systems installed on various model helicopters. This proposed AD would require replacing electrical connectors and would prohibit the installation of other parts. This proposed AD is prompted by reports of overheated connectors. The proposed actions are intended to address an unsafe condition on these products.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments by any of the following methods:

- **Federal eRulemaking Docket:** Go to <http://www.regulations.gov>. Follow the online instructions for sending your comments electronically.
- **Fax:** 202-493-2251.
- **Mail:** Send comments to the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey

Avenue SE, Washington, DC 20590-0001.

- Hand Delivery: Deliver to the “Mail” address between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-1217; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the economic evaluation, the Special Airworthiness Information Bulletin (SAIB), any comments received, and other information. The street address for Docket Operations (telephone 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

For service information identified in this proposed rule, contact Air Comm Corporation, 1575 West 124th Ave., Westminster, CO 80234; telephone (303) 440-4075; email [service@aircommcorp.com](mailto:service@aircommcorp.com); website [www.aircommcorp.com](http://www.aircommcorp.com). You may review the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177.

**FOR FURTHER INFORMATION CONTACT:** Matthew Bryant, Aerospace Engineer, Denver ACO Branch, Compliance and Airworthiness Division, FAA, 26805 East 68th Ave., Room 214, Denver, CO 80249; telephone (303) 342-1092; email [matthew.bryant@faa.gov](mailto:matthew.bryant@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Comments Invited**

We invite you to participate in this rulemaking by submitting written comments, data, or views. We also invite comments relating to the economic, environmental, energy, or federalism impacts that might result from adopting the proposals in this document. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. To ensure the docket does not contain duplicate comments, commenters should send only one copy of written comments, or if comments are filed electronically, commenters should submit only one time.

We will file in the docket all comments that we receive, as well as a report summarizing each substantive public contact with FAA personnel concerning this proposed rulemaking. Before acting on this proposal, we will consider all comments we receive on or before the closing date for comments. We will consider comments filed after the comment period has closed if it is possible to do so without incurring expense or delay. We may change this proposal in light of the comments we receive.

### **Discussion**

On August 13, 2015, we issued SAIB SW-15-20 to alert owners and operators of Bell Helicopter Textron Canada Limited (Bell) Model 206, 407, and 427; Agusta S.p.A. Model A119; and Airbus Helicopters Model AS350, EC120, and EC130 helicopters of possible overheated and melted connectors in the wiring of certain Air Comm air conditioning system units. SAIB SW-15-20 was prompted by a report of a melted and discolored aft evaporator assembly connector due to poor crimping during installation of

the connector or during production. SAIB SW-15-20 recommends inspecting the connectors for evidence of overheating and loose contact by following the Air Comm service bulletins, and if there is evidence of overheating or loose contact, making the air conditioning system inoperable until those connectors are replaced.

Since we issued SAIB SW-15-20, we received additional reports of melted and burned connectors. Further investigation revealed the connector design may be insufficient for some of these model helicopters because of electrical current load, installation location, vibration environment, and susceptibility to environmental factors. As a result, the connector may develop low pin tension between the socket and the pin, leading to high electrical resistance, subsequently resulting in excessive pin and socket temperatures. Overheating of the connector could result in a fire and subsequent loss of control of the helicopter. In July 2016, Air Comm introduced a newly designed connector that can withstand the demands and environment of the aft evaporator blower motor.

Accordingly, we are proposing an AD for certain part-numbered Air Comm air conditioning systems installed on Airbus Helicopters Model AS350B, AS350B1, AS350B2, AS350B3, AS350BA, AS350C, AS350D, AS350D1, and EC130B4, and Bell Model 206A, 206B, 206L, 206L-1, 206L-3, and 206L-4, and 407 helicopters. This proposed AD would require replacing each aft evaporator blower motor connector with the newly designed connector and would prohibit installing certain parts in the aft evaporator assembly, aft evaporator blower assembly, and aft condenser blower. The actions specified in this proposed AD are intended to prevent overheating of a connector, which could result in a fire and subsequent loss of control of the helicopter.

These Air Comm air conditioning systems may be installed on Airbus Helicopters

Model AS350B, AS350B1, AS350B2, AS350B3, AS350BA, AS350C, AS350D, and AS350D1 helicopters per Supplemental Type Certificate (STC) SR00643DE; on Airbus Helicopters Model EC130B4 helicopters per STC SR00543DE; on Bell Model 206A, 206B, 206L, 206L-1, 206L-3, and 206L-4 helicopters per STC SH2750NM; and on Bell Model 407 helicopters per STC SR00222DE. Because field reports revealed that Agusta S.p.A. Model A119, Airbus Helicopters Model EC120, and Bell Model 427 helicopters are not affected by this unsafe condition, we are not including these models in this proposed AD.

#### **FAA’s Determination**

We are proposing this AD because we evaluated all known relevant information and determined that an unsafe condition exists and is likely to exist or develop on other products of these same type designs.

#### **Related Service Information Under 1 CFR part 51**

We reviewed Air Comm Corporation Service Bulletin (SB) SB AS350-111014 for Airbus Helicopters AS350 series helicopters and SB EC130-6204 for Airbus Helicopters EC130 series helicopters, both Revision B and dated January 10, 2017. We also reviewed SB 206-110414 for Bell 206 series helicopters, Revision C, and SB 407-110414 for Bell Model 407 helicopters, Revision D, both dated January 13, 2017. This service information specifies inspecting certain aft evaporator blower motor and certain condenser blower electrical connectors for indications of overheating, discoloration, and plastic deformation and performing a pull test. This service information also specifies replacing connector housings and contacts that fail the inspection or the pull test.

This service information is reasonably available because the interested parties

have access to it through their normal course of business or by the means identified in the ADDRESSES section.

### **Other Related Service Information**

We also reviewed the following Air Comm Corporation service information:

- SB AS350-111014 and SB EC130-6204, both Revision A and both dated July 6, 2016;
- SB 206-110414, Revision B, dated January 10, 2017 and Revision A dated June 3, 2016; and
- SB 407-110414, Revision C, dated January 10, 2017, and Revision B, dated July 6, 2016.

This service information contains the same procedures described above. However, SB AS350-111014 and SB EC130-6204, both Revision B and dated January 10, 2017, contain additional instructions and figures for the connectors. SB 206-110414, Revision C, and SB 407-110414, Revision D, both dated January 13, 2017, contain minor corrections.

### **Proposed AD Requirements**

This proposed AD would require replacing certain connectors with Air Comm connectors and prohibit installing certain part-numbered plugs, sockets, receptacles, and pin in certain part-numbered aft evaporator assemblies, aft evaporator blower assemblies, and aft condenser blowers.

### **Differences Between this Proposed AD and the Service Information**

The Air Comm service information specifies a compliance time of 20 flight hours. This proposed AD would require compliance within 90 hours time-in-service. The Air

Comm service information specifies inspecting each connector and replacing the connector housings and contacts that have any signs of overheating or that fail a pull test. This proposed AD would require replacing each connector without an inspection. This proposed AD would also prohibit installing certain parts in certain part-numbered aft evaporator assemblies, aft evaporator blower assemblies, and aft condenser blowers.

### **Costs of Compliance**

We estimate that this proposed AD would affect 914 units installed on helicopters of U.S. Registry. We estimate that operators may incur the following costs in order to comply with this AD. Labor costs are estimated at \$85 per work-hour. Replacing the connectors would take about 1 work-hour and parts would cost about \$60 for a total cost of \$145 per helicopter and \$132,530 for the U.S. fleet.

According to Air Comm's service information, some of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage by Air Comm. Accordingly, we have included all costs in our cost estimate.

### **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by

prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed, I certify this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared an economic evaluation of the estimated costs to comply with this proposed AD and placed it in the AD docket.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by Reference, Safety.



## **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

**Air Comm Corporation (Air Comm) Air Conditioning Systems:** Docket No. FAA-2017-1217; Product Identifier 2016-SW-080-AD.

#### **(a) Applicability**

This AD applies to the following helicopters, certificated in any category:

(1) Airbus Helicopters Model AS350B, AS350B1, AS350B2, AS350B3, AS350BA, AS350C, AS350D, and AS350D1 helicopters with an Air Comm air conditioning system part number (P/N) AS350-202-1, AS350-202-2, AS350-202-3, AS350-202-4, AS350-202-5, AS350-204-1, AS350-204-2, AS350-204-3, AS350-204-4, AS350-204-5, AS350-204-6, AS350-204-7, AS350-204-8, AS350-204-9, AS350-204-10, AS350-204-11, or AS350-204-12 installed.

(2) Airbus Helicopters Model EC130B4 helicopters with an Air Comm air conditioning system P/N EC130-202-1, EC130-202-2, EC130-202-3, EC130-202-4, EC130-202-5, EC130-202-6, EC130-202-7, or EC130-202-8 installed.

(3) Bell Helicopter Textron Canada Limited (Bell) Model 206A, 206B, 206L,

206L-1, 206L-3, and 206L-4 helicopters with an Air Comm air conditioning system P/N 206EC-200, 206EC-201, 206EC-202, 206EC-203, 206EC-204, 206EC-205, 206EC-206, 206EC-207, 206EC-208, 206EC-209, 206EC-210, 206EC-211, or 206EC-212 installed.

(4) Bell Model 407 helicopters with an Air Comm air conditioning system P/N 407 EC-201, 407 EC-202, or 407 EC-203 installed.

**(b) Unsafe Condition**

This AD defines the unsafe condition as an overheated connector. This condition could result in a fire and subsequent loss of control of the helicopter.

**(c) Comments Due Date**

We must receive comments by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

**(d) Compliance**

You are responsible for performing each action required by this AD within the specified compliance time unless it has already been accomplished prior to that time.

**(e) Required Actions**

(1) Within 90 hours time-in-service:

(i) For Airbus Helicopters Model AS350B, AS350B1, AS350B2, AS350B3, AS350BA, AS350C, AS350D, and AS350D1 helicopters, replace each aft evaporator blower motor connector with an Air Comm connector as depicted in Figures 2, 3, and 4 of Air Comm Service Bulletin (SB) SB AS350-1110014, Revision B, dated January 10, 2017, by using a Deutsch HDT-48-00 or an equivalent MIL-DTL22520 Type 1 crimping tool.

(ii) For Airbus Helicopters Model EC130B4 helicopters, replace each aft

evaporator blower motor connector with an Air Comm connector as depicted in Figures 2, 3, and 4 of Air Comm SB EC130-6204, Revision B, dated January 10, 2017, by using a Deutsch HDT-48-00 or an equivalent MIL-DTL22520 Type 1 crimping tool.

(iii) For Bell Model 206A, 206B, 206L, 206L-1, 206L-3, and 206L-4 helicopters, replace each aft evaporator blower motor connector with an Air Comm connector as depicted in Figures 4, 5, and 6 of Air Comm SB 206-110414, Revision C, dated January 13, 2017, by using a Deutsch HDT-48-00 or an equivalent MIL-DTL22520 Type 1 crimping tool.

(iv) For Bell Model 407 helicopters, replace each aft evaporator blower motor connector with an Air Comm connector as depicted in Figures 4, 5, and 6 of Air Comm SB 407-110414, Revision D, dated January 13, 2017, by using a Deutsch HDT-48-00 or an equivalent MIL-DTL22520 Type 1 crimping tool.

(2) After the effective date of this AD, do not install the following in any aft evaporator assembly P/Ns AS350-6202, EC130-6204-1, or EC130-6204-2; aft evaporator blower assembly P/Ns S-6078EC-15, S-6102EC-3, or S-6102EC-4; or aft condenser blower P/Ns S-7060EC-1, S-7060EC-2, S-7062EC-1 or S-7062EC-2:

- (i) Plug P/N 03-09-1022, 03-09-1032, and 03-09-1042;
- (ii) Socket P/N 02-09-1103 and 02-09-1104;
- (iii) Receptacle P/N 03-09-2022, 03-09-2032, and 03-09-2042; and
- (iv) Pin P/N 02-09-2103.

**(f) Credit for Previous Actions**

Replacing the connectors before the effective date of this AD in accordance with Air Comm SB 206-110414, Revision A, dated June 3, 2016; SB AS350-111014 or SB

EC130-6204, both Revision A and both dated July 6, 2016; SB 407-110414, Revision B, dated July 6, 2016; SB 206-110414, Revision B, dated January 10, 2017; or SB 407-110414, Revision C, dated January 10, 2017, is considered acceptable for compliance with the corresponding required actions specified in paragraph (e)(1) of this AD.

**(g) Alternative Methods of Compliance (AMOC)**

(1) The Manager, Denver ACO Branch, FAA, may approve AMOCs for this AD. Send your proposal to: Matthew Bryant, Aerospace Engineer, Denver ACO Branch, Compliance and Airworthiness Division, FAA, 26805 East 68th Ave., Room 214, Denver, CO 80249; telephone (303) 342-1092; email [matthew.bryant@faa.gov](mailto:matthew.bryant@faa.gov).

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, we suggest that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office before operating any aircraft complying with this AD through an AMOC.

**(h) Additional Information**

Air Comm SB 206-110414, Revision A, dated June 3, 2016; SB AS350-111014 or SB EC130-6204, both Revision A and both dated July 6, 2016; SB 407-110414, Revision B, dated July 6, 2016; SB 206-110414, Revision B, dated January 10, 2017; and SB 407-110414, Revision C, dated January 10, 2017, which are not incorporated by reference, contain additional information about the subject of this AD. For service information identified in this AD, contact Air Comm Corporation, 1575 West 124th Ave., Westminster, CO 80234; telephone (303) 440-4075; email [service@aircommcorp.com](mailto:service@aircommcorp.com); website [www.aircommcorp.com](http://www.aircommcorp.com). You may review a copy of this service information at

the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy,  
Room 6N-321, Fort Worth, TX 76177.

**(i) Subject**

Joint Aircraft Service Component (JASC) Code: 2197, Air Conditioning System  
Wiring.

Issued in Fort Worth, Texas, on January 2, 2018.

Scott A. Horn,

Deputy Director for Regulatory Operations,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

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